**Energy Efficiency Study Committee**
**October 18, 2007**

**Municipal Utilities and Energy Efficiency**

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The purpose of my remarks is to tell you a little about what's behind the numbers that describe our members' energy efficiency programs. Iowa municipal utilities have been recognized among early leaders in energy efficiency and renewable energy and early adopters of new technology. Osage Municipal Utilities earned an international reputation for leadership in energy efficiency in the 1970s. Sioux Center, Osage, Sanborn, and Denison were the first Iowa utilities to install computer-based load management systems to control air conditioners and water heaters. That was almost 25 years ago. There are lots of reasons to do more, but energy efficiency is not new to municipal utilities.

Cedar Falls and Waverly are often cited for their long-standing commitment to energy efficiency. I believe their efforts to properly size furnaces and air conditioners are among the best energy efficiency and demand reduction programs anywhere in the country. Independence and Bellevue have adopted similar programs and our association now offers technical assistance so that even the smallest utilities can provide this service.

As with equipment sizing, it's often the little things – done right – that make the difference between a good program and an exceptional one. For example, Forest City instituted a comprehensive appliance rebate program in 1992. In their program, a rebate on an Energy Star refrigerator is given only if the customer lets the utility take the old one out of service. There's no energy savings if the old refrigerator becomes a beer cooler in the garage. Afton's compact fluorescent program also dealt with the important detail of putting the lights in service. Each household in the community received a CFL bulb, but for elderly residents, the bulbs were physically installed in frequently used fixtures, ensuring that the program got results.

We expect to see a lot more effort in financing of measures. For example, Woodbine supports the purchase of energy efficiency appliances through a zero interest loan program. The utility finances 90 percent of the cost of heat pumps, air conditioners, and water heaters and the customer repays the loan with the resulting savings.

Local control allows energy efficiency programs to address local needs. For example, Pocahontas controls more than half of all residential air conditioners and nearly a third of the commercial units. That utility distributes program participation incentives in the form of *Pocibucks* – that keep savings in the local economy. *Greenfield Greenbacks* are used to promote energy efficiency in that community. These program twists help build local support for energy efficiency by contributing to the economic health of the community.

Our joint response to the IUB's investigation of energy efficiency programs offered in 2006 shows that, while some municipal utilities are leaders and innovators, the efforts of some others are below par. However, the information we gathered also shows that utilities are re-evaluating energy efficiency in light of substantial changes in the power supply market and a newly emerging consensus about climate change.

Over the 15 or so years that municipal utilities have filed energy efficiency plans with the IUB, the price of electricity and gas has been very low. During most of that time, Iowa had a lot of excess electric generating capacity. Municipal utilities that owned base-load generation needed to sell electricity to pay the debt on their investment. Those that did not own generation could purchase power under long-term contracts at costs that reflected the marginal cost of production (typically at or near 2 cents/kWh). Current law requires that *"[t]he energy efficiency plans as a whole shall be cost effective."* Few energy efficiency programs were cost effective when the cost of energy cost so low.

The picture has changed a lot in recent years. The Energy Policy Act of 1992 set in motion a gradual shift away from regulation of utilities and toward competitive markets. The jury is still out on the extent to which market forces can substitute for regulation of natural monopolies, but so far the picture is not a pretty one. The transmission grid in our region has been inadequate to support the vibrant wholesale market envisioned in the original policy. Low cost generation, which previously served Iowans, has found higher prices in the regional market. At the same time, growth in demand has used up excess capacity. The cost of producing a kilowatt hour of electricity from a new coal fueled power plant is more than twice that of a kilowatt hour from the older fleet of power plants. Energy generated by new gas-fueled turbines costs even more. One consequence of these market changes is that energy efficiency programs that save energy at a cost of 3 to 6 cents per kWh are now cost effective, where they were not cost effective just a few years ago. Similarly, deregulation of natural gas and its increased use as a generating fuel for electricity have brought about higher prices and substantial price volatility. Utilities are addressing these changing market conditions by ramping up their investment in energy efficiency.

In addition to market changes, utilities are coming to grips with a new understanding of their responsibility to address climate change. The consequence of releasing – over a couple of hundred years – atmospheric carbon that was sequestered in fossil plants and animals over eons of earth history has been understood for a long time. Consensus in the scientific community about human impact on climate change is much more recent and the shift in understanding by a popular majority of Americans has come only in the last year. Municipal utilities and their citizen-owners are responding. They understand that the largest and least expensive reductions in greenhouse gases will come through energy efficiency.

As we collected data on results of 2006 programs, we also asked about new programs. For example, Atlantic plans to distribute high power factor compact fluorescent lights. The utility will pay local community organizations to distribute the CFLs. Volunteers will offer to install two of the bulbs in each resident's most frequently used light fixtures. An important element of this program is its focus on CFL power factor. The bulbs that Atlantic will distribute have a power factor of .9, whereas the average for CFLs is .5 to .6. As CFLs replace more and more incandescent bulbs, this difference will have a big impact on the reliability of the power grid – another example of how attention to detail and local control pays dividends.

Other examples of new programs include Waverly's pioneering adoption of inclining block rates and installation of LED street lighting at Pella, Estherville, and Muscatine. We are also planning pilot projects to identify and replace the worst performing

appliances in a community. Our goal is to capture multiple benefits from making the homes of low-income and fixed-income homeowners and renters more energy efficient. We are also developing model ordinances that would set minimum energy efficiency standards as a condition for certificates of occupancy on rental property.

Local control of 136 municipal electric utilities and 49 gas systems provide Iowa with a kind of laboratory for innovation, where new programs can be tested and the details refined. Local control also recognizes that a program that works well in one community may not make much sense in another. Some of our members have experienced remarkable growth rates. Others are experiencing significant population declines. Some have substantial commerce and industry, while others have virtually none. In some, a single housing start would make front page news; if the newspaper was still in business. Others have stable populations, but have housing which is disproportionately owned by older residents on fixed incomes. Some of the utilities that serve low-growth communities offer comprehensive and generous appliance rebate programs, but they have been able to get few, if any, takers. Metrics intended to show utility effort in energy efficiency have little meaning for these utilities.

Utility size is not an excuse for doing nothing about energy efficiency, but size and local circumstances matter. Many of Iowa's municipal electric and gas utilities are small. About half of the electric utilities have fewer than 1,000 customers; a fourth of them have fewer than 500. The smallest utilities may have only part-time employees with contracted operational and technical support. These utilities face increasing demands for recordkeeping and reporting. And they must deal with market issues never envisioned in the past. Deployment of new energy efficiency programs adds yet another burden on these small systems, though many have shown they are up to the task.

Energy efficiency has been a top priority for our association in recent years. It is at the very top of our planning agenda now. Attached to my handout is a section of our work plan that our board of directors has requested for review at their November 1 meeting. It catalogs a wide range of energy efficiency services IAMU makes available to its members. Most of them are already in place. Our goal is to help our member utilities become industry leaders in energy efficiency. We believe we can get the job done.

In closing, let me acknowledge that there are rational arguments for uniformity in energy efficiency programs and their delivery by independent third parties. Our experience is that the loss of local control over municipal utility programs would deprive Iowa of the value that comes when local citizens have the power to try innovative approaches that fit the needs of their communities. We hope you will give us that opportunity.

## 2008-09 IAMU Work Plan
## Energy Efficiency and Conservation

**CHALLENGE:** Recognition of the risks associated with global warming, increasing costs for generation and transmission of electricity, public demand for greater energy efficiency, and the enormous opportunity to reduce energy consumption and peak demand challenge Iowa's municipal utilities to increase their commitment to energy efficiency.

**GOAL:** To enhance IAMU's programs and services that will assist member utilities to become leaders in energy efficiency and conservation.

**WORK PLAN:**

| **Supporting activity** | **IAMU objective** |
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| 1. Educate members about the value to the utility and its customer-owners of increased investment in energy efficiency. | (1a) Newsletters, conferences, workshops, and special mailings will be used to educate members about the value demand side management investments and why they should be viewed as equal or superior to similar investments in additional electric generating capacity or natural gas purchases.<br><br>(1b) Utilize computer-based tools and staff experience to evaluate the costs and benefits of energy efficiency and demand reduction programs and measures for our members.<br><br>(1c) Highlight utility best practices in the IAMU Newsletter or successor magazine and recognize exemplary programs through awards program. |
| 2. Develop a comprehensive menu of measures and services for selection, implementation, and evaluation of DSM programs. Offer IAMU registered "Hometown Choice" branding of these measures. | (2) Offer a menu of measures and services that includes components similar to the following:<br><br>1. Program design<br>a. Staff consultation<br>b. DSM cost-benefit estimation and post-delivery analysis<br>c. Power supply/demand-side optimization<br>2. Program marketing & customer education<br>a. Sample marketing materials and customized materials for customers, vendors, and trade allies<br>b. "Town meeting" kit for building community support for DSM<br>c. Iowa Energizer or similar customer news & education publications<br>d. IAMU and local utility support for Iowa Energy Poster Contest and energy related school curricula |

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| | e. The not-so-compact CFL balloon rental for promotional events<br>3. Program options<br>a. On-line and/or take home residential audit<br>b. Contract service for HomeFitness energy audits<br>c. Model and customized appliance rebate programs, with option for turn-key administration by IAMU<br>d. HVAC sizing and rebate programs<br>e. Geothermal system rebates<br>f. Change a Light, Change the World<br>g. Direct CFL distribution and/or sales, including high power factor lamps<br>h. Weatherization programs and kits<br>i. Model efficient appliance financing programs<br>j. Low income programs, including electric and gas appliance financing<br>k. Model ordinance for certificate of occupancy based on minimum energy efficiency standards<br>l. Model enhanced energy efficiency standards for local buildings<br>m. Energy code enforcement services<br>n. Load control equipment referral<br>o. Marathon electric water heater joint purchase program<br>p. Model and customized rate design<br>q. CFL, refrigerator, mercury thermostat switch, and small battery disposal programs<br>r. Commercial and industrial motor, compressor, HVAC, and refrigeration consultation<br>s. Contracted industrial energy audit services<br>t. Contracted key accounts program for large commercial and industrial customers (Energy Group, Inc. or other)<br>u. Others, based on interest and availability<br>4. Evaluation<br>a. Statistical summaries of customer participation<br>b. DSM benefit-cost analysis<br>5. Other related services<br>a. File forms and reports to local, state, and federal policymaking and administrative |

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| | authorities.<br>b. Conduct studies, improve data quality and data access, and prepare reports that describe and evaluate municipal DSM programs. |
| 3. Offer a customized, comprehensive, turn-key program, as an alternative to al a carte selection of services and measures, which is designed to effectively spend a designated dollar amount or percentage of gross revenue, such as 2 percent of annual revenue. Utilize IAMU's registered "Hometown Choice" branding in offering this turn-key service. | (3) Using staff and contracted services, develop utility-specific program that includes policy-maker and public education of the purpose, costs, and benefits of ongoing investment in DSM and the selection, implementation and evaluation of DSM measures that effectively utilize the level of spending authorized by the utility. |
| 4. Provide models, consultation, and contracted services to market DSM programs to consumers. | (4a) Conduct RFP/RFQ processes for the design, customization, reproduction, and placement of program marketing<br>(4b) Provide contract services for customer surveys and other techniques for successful program marketing<br>(4c) Help members incorporate DSM information on utility web sites, including on-line access to programs measures |
| 5. Offer integrated resource planning to members. | (5) Assuming sufficient member demand, utilize current software tools and staff experience to assist members in identifying an optimal mix of demand-side and supply-side resources |
| 6. Cooperate with willing joint action entities, RECs, and IOUs, in achieving this goal. | (6a) Contact joint action agencies in which our members participate to encourage appropriate and meaningful DSM action and cooperate, to the greatest extent possible, in development and delivery of DSM programs and measures<br>(6b) Where practicable, encourage and facilitate cooperative programs with RECs and IOUs |
| 7. Inform state legislators, Congress, and appropriate state and federal administrative agencies of municipal utility DSM programs, successes, and resource needs. | (7a) Make presentations about municipal DSM programs to legislative committees, administrative agencies, and policy advocacy organizations<br>(7b) Represent municipal utilities in energy related trade organizations, policy advocacy organizations, |

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| | and task forces<br><br>(7c) Highlight utility best practices in the IAMU Newsletter or successor magazine<br><br>(7d) Advise members regarding opportunities and strategies for earned media<br><br>(7e) Advocate for municipal equity in tax incentives, grants, and other government programs designed to encourage energy efficiency |
| 8. Facilitate member participation in the MISO ancillary services market. | (8) Follow development of the market, assess opportunities for municipal participation, encourage and facilitate participation, using joint action to the extent practicable |